

SPAWNING OF WESTERN ATLANTIC REEF FISHES

PATRICK COLIN,
A. CHARLES ARNESON,
and
RALF BOULON, JR.

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Purpose: (1) Investigate the occurrence and duration of spawning by western Atlantic marine shore fishes. (2) Determine behavior and movement of various species before, during, and after spawning. (3) Collect eggs of selected species for larval rearing.

Participants: Patrick Colin, Principal Investigator—University of Puerto Rico, A. Charles Arneson, and Ralf Boulon, Jr.

Accomplishments: Definite spawning was observed for seven species of fishes, all in a limited area within 100m of the east wall "tank drop" area. Potential courtship was observed in several other species, but no definite spawning was observed.

Observations were made at various locations and times of day, with emphasis on the late afternoon period. With dawn representing 0% day and sunset representing 100% day, the most intensive observations were made during the period from 80-100% day, and then extending to 2.5% night (using the same system). This relative day length (RDL) measurement system is useful for comparison with similar observations at different locations and different times a year.

During the dive, 52 definite spawning events were observed. Results correlated well with those gathered by Principal Investigator Colin in Puerto Rico. In addition, the ability to observe complete courtship and spawning cycles

confirmed many of the preliminary but untested hypotheses based on segmented observations of each cycle on a number of different dives.

Several relatively uncommon marine invertebrates were found in the west wall area. These included the small lobster *Palinurellus gundlachi* and various slipper lobsters. The lobster *Justitia* was particularly common in reef caves outside the excursion limit line on the east wall.